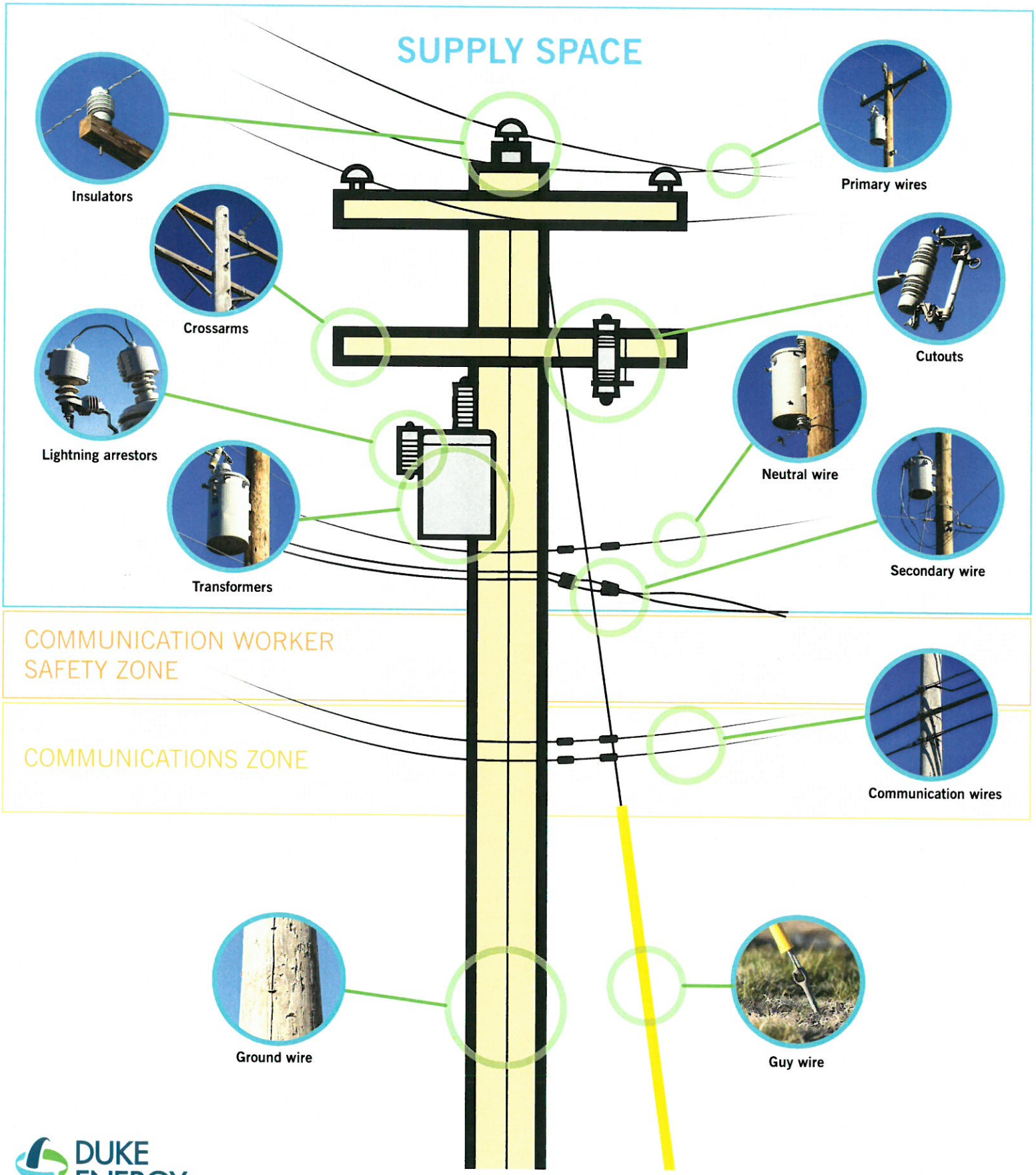
# What's on an electric utility pole?

Here is the equipment you might see on a typical electric distribution power pole.




DUKE ENERGY®

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Descriptions of the equipment you might see on a typical electric distribution power pole.

Insulators

**Insulators**, typically made of porcelain or rubber, prevent energized wires from coming in contact with each other or the utility pole.

**Primary wires** run on top of the pole and carry between 4,000 and 25,000 volts of electricity.

Primary wires

Crossarms

**Crossarms** are used to secure electrical power lines to poles.

**Cutouts** (or switches) work like a fuse and open automatically when they sense a problem with the line or a section of it.

Cutouts

Lightning arrestors

**Lightning arrestors** protect equipment from lightning strikes or other accidental electric surges by discharging it to Earth.

The **neutral wire** acts as line back to the substation and balances out the amount of electricity on the system.

Neutral wire

Transformers

**Transformers** convert higher-voltage electricity carried by the primary wires to a lower voltage for use in homes and businesses.

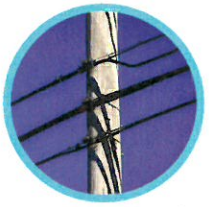
A **ground wire**, running the length of the pole, helps to protect equipment, line workers and the public by providing a conducting path safely to the ground.

Ground wire

Secondary wire

The **secondary wire** (or service drop) carries lower voltage electricity from the transformer to individual electric meters.

**Communication wires** (telephone, cable, fiber optics) are usually the lowest wires.



Communication wires

**Guy wires** help stabilize the pole.

Guy wire